



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

Lit

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/808.315	02/28/97	KINOSHITA	H 247/PD-5385

LOEB & LOEB
10100 SANTA MONICA BOULEVARD
22ND FLOOR
LOS ANGELES CA 90067

MM12/1208

EXAMINER

LEUNG.Q

ART UNIT

PAPER NUMBER

2874

DATE MAILED 04/18/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/808,315

Applicant(s)

Kinoshita et al

Examiner

Quyen Leung

Group Art Unit

2874

☒ Responsive to communication(s) filed on Sep 27, 1999

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 17-21 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 17-21 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 2874

DETAILED ACTION

Response to Amendment

1. In response to applicant's amendment filed on 9/27/1999, claims 1-8 have been canceled; claims 17-21 added. Claims 17-21 are pending. Applicant's arguments have been considered but were not found to be convincing. Claims 17-21 are finally rejected below.

Specification

2. The amendment filed 9/27/99 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "may be" replacing "is widely".

Applicant is required to cancel the new matter in the reply to this Office action.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Setsune (JP 61-121042). Setsune discloses a "tool" comprising a sapphire monocrystal body 1 having a sharp edge formed by a working plane and a cleavage plane parallel to a plane R (see the translated

Art Unit: 2874

abstract, "end faces 16 and 17 of a substrate 1 are produced by cleavage along the R surface of a sapphire") of the sapphire monocrystal.

Note that there are four sharp edges formed by four "working" planes and the cleavage plane 16 parallel to a plane R. Also, there are four other sharp edges formed by the same four working planes and the cleavage plane 17 parallel to a plane R. Because there is at least one sharp edge formed by a working plane and cleavage plane parallel to a plane R of the sapphire monocrystal, Setsune meets the claimed invention.

Regarding the preamble of "tool", it is inherent that Setsune is a "tool" because Setsune meets all the claimed features, as discussed above.

5. Claims 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Morita et al (5,753,966).

Regarding claim 18, Morita et al teaches a semiconductor device comprising a substrate 1 formed of a sapphire monocrystal(see column 3 lines 4-5), the substrate 1 having a major face (**{11-20} plane or plane a**) and a side face (**{1-102} plane, i.e., <plane r>**), the side face being a cleavage plane parallel to a plane R (see abstract: "**a pair of facets on the above described substrate due to the plane which was cleaved in {1-102} plane (plane r)**") of the sapphire monocrystal; and a semiconductor element 2 formed on the major face (**plane a**) of the sapphire substrate 1.

It is inherent that the sapphire substrate of Morita et al is a monocrystal because Morita et al does not teach the sapphire being mixed with any other crystals.

Art Unit: 2874

Regarding claim 19, Morita et al teaches the semiconductor element 2 being a laser diode (see column 1 lines 5-10) having a laser light-emitting semiconductor multilayer (4, 5, 6, 7, 8, 9) formed on the major face ({11-20} **plane or plane A**) of the substrate 1, wherein the side cleavage plane ({1-102} **plane (plane r)**) of the sapphire substrate 1 is connected with a side cleavage plane 3 of the multilayer 2.

Regarding claim 20, Morita et al teaches a sapphire monocrystal plate 1 having a major face (**plane a**) and a working reference plane (**plane r**) on a peripheral edge of the plate 1, the working reference plane (**plane r**) being substantially parallel or perpendicular to a plane R of the sapphire monocrystal 1, the working reference plane (**plane r**) being used as a mark to form on the major surface (**plane a**) a microcrack line (**striped grooves 18**) parallel to the plane R for starting to cleave the plate 1.

Regarding claim 21, see column 3 lines 58-67 for the angle between the working reference plane (**plane r**) and the plane R being between about -10 to +10 degrees or about 80 to 100 degrees.

Response to Arguments

6. Applicant's arguments filed 9/27/1999 have been fully considered but they are not persuasive. Applicant made the following arguments:

a. "Certified copies of the priority documents have been received by the PTO.

Accordingly, the applicant respectfully request that the rejection over Morita be withdrawn."

Art Unit: 2874

Regarding argument a above, note that MPEP section 706.02(b) **Overcoming a 35 U.S.C. 102 Rejection Based on a Printed Publication or Patent** under part "E" of the "A rejection based on 35 U.S.C. 102(e) can be overcome by:" subsection states the following:

Perfecting a claim to priority under 35 U.S.C. 119(a)-(d). The foreign priority filing date must antedate the reference and be perfected. The filing date of the priority document is not perfected unless applicant has filed a certified priority document in the application (and an English language translation, if the document is not in English) (see 37 CFR 1.55) and the examiner has established that the priority document satisfies the enablement and description requirements of 35 U.S.C. 112, first paragraph;

In this case, since Applicant's certified priority documents are not in English, Applicant should file an English translation of each document before the filing date of the priority documents is perfected and the rejection over Morita can be withdrawn.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

Art Unit: 2874

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

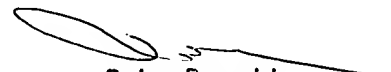
Papers related to this application may be submitted to Technology Center 2800 by facsimile transmission. Papers should be faxed to Technology Center 2800 via the PTO Fax Center located in CP4-4C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Center's number is (703) 308-7724.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quyen Phan Leung whose telephone number is (703) 308-0545.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Quyen Phan Leung
Patent Examiner
December 03, 1999



Rodney Bovernick
Supervisory Patent Examiner
Technology Center 2800